

## REMARKS

### Introductory Comments

Reconsideration of the above-identified application in view of the above amendments and foregoing arguments is respectfully requested.

Claims 57-62 and 72-84 are pending and under consideration. Claims 63-71 are canceled in response to the restriction requirement. Claims 57, 58, 60, 62 and 83 have been amended. New claim 84 has been added.

Claim 57 has been amended to read "a sequence segment encoding for polyketide synthase enzymatic activity. Support for the amendment can be found in the specification at page 17 under the section titled "V. Novel Polyketides and Methods of Making Novel Polyketides" where polyketide biosynthetic genes and their nucleotide sequences or fragments are identified. Claims 58, 60, 62 and 83 have been amended to incorporate the Markush grouping language or reworded in order to place the claims in a better condition for allowance. New claim 84 has been added using the language suggested by the Examiner. Applicants express appreciation for the Examiner's recommendation of claim 84.

Applicants acknowledge with thanks the Examiner's approval of the substitute specification, filed on March 27, 2003 and the withdrawal of the rejection of claims 59-62, 72-75, 77, 78, 82 and 83 under 35 U.S.C. § 112, first paragraph, for lack of an adequate written description in view of the substitute specification. Applicants further acknowledge with thanks the Examiner's withdrawal of the rejection of claims 57-62, 72-74, 77, 78, 82 and 83 under 35 U.S.C. § 112, first paragraph, for lack of enablement in view of Applicants' arguments. Applicants have amended the specification to update the status of related patent applications as required by the Examiner.

### Abstract

The disclosure was objected to because the substitute specification did not include an abstract. Accordingly, a new abstract has been submitted herein. Applicants respectfully request the withdrawal of the objection to the disclosure.

### Rejection of Claims 57-62 and 72-83 Under 35 U.S.C. § 112,

#### Second Paragraph

Claims 57-62 and 72-83 are rejected under 35 U.S.C. § 112, second paragraph because the recitation of the term “polyketide synthase domain” in clauses 2 and 3 of the claims confuses the domain of a peptide with a DNA sequence since a DNA sequence cannot contain a domain. Accordingly, Applicants have amended the claims to recite “a sequence fragment encoding for a polyketide synthase enzymatic activity” and “introducing one or more specified changes into said sequence fragment resulting in an altered DNA sequence.” Applicants submit that this amendment overcomes the §112 rejection and respectfully request the withdrawal of the rejection of claims 57-62 and 72-83 under 35 U.S.C. § 112, second paragraph.

Claims 81 and 82 are independently rejected for being indefinite in reciting, respectively, “protein” and “proteins.” More specifically, the Examiner states, “Claims 81 and 82 are independently rejected because they are indefinite in reciting, respectively, ‘protein’ and ‘proteins’ where Applicant actually intends, the disclosure requires, and claim 57 provides, antecedent basis only for a particular kind of protein: a polyketide synthase.” Applicants respectfully submit that the rejection is confusing. It appears that the Examiner is rejecting claims 81 and 82 for claiming a different protein other than a polyketide synthase that is produced from the gene-containing DNA sequence as disclosed in the description and claimed in claim 57.

Claim 81 calls for said DNA sequence, designated *eryA*, that encodes a protein having enzymatic activities associated with the formation of 6-deoxyerythronolide B and claim 82 calls for said gene-containing DNA sequence encodes one or more proteins having enzymatic activities in the rapamycin

biosynthetic pathway (emphasis added). The claims do not call for said DNA sequence encoding 6-deoxyerythronolide B nor rapamycin. Instead the claims call for encoding a protein that has enzymatic activities associated with the formation of 6-deoxyerythronolide B or proteins having enzymatic activities in the rapamycin biosynthetic pathway. The relevant protein(s) in claims 81 and 82 which are encoded by the relevant DNA sequence are not claimed to be something other than a polyketide synthase as contended by the Examiner. Accordingly, it is respectfully requested that the rejection of claims 81 and 82 independently under 35 U.S.C. § 112, second paragraph, be withdrawn.

New claim 84 has been added and written in the format suggested by the Examiner for allowance. Applicants express appreciation for the Examiner's recommendation of claim 84 and suggestive language to the claims in order to overcome the rejections. Accordingly, Applicants have implemented all recommendations made by the Examiner.

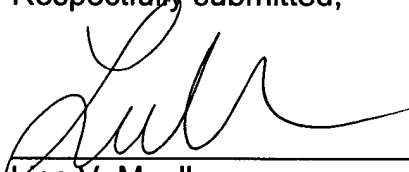
## CONCLUSION

Applicants respectfully submit that the claims comply with the requirements of 35 U.S.C. Sections 101, 112, 102 and 103. Accordingly, a Notice of Allowance is believed to be in order and is respectfully requested.

Should the Examiner have any questions concerning the above, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below. If the Examiner notes any further matters which the Examiner believes may be expedited by a telephone interview, the Examiner is requested to contact the undersigned.

If any additional fees are incurred as a result of the filing of this paper, authorization is given to charge deposit account no. 23-0785.

Respectfully submitted,

  
\_\_\_\_\_  
Lisa V. Mueller  
Registration No. 38,978  
Attorney for Applicants

Wood, Phillips, Katz, Clark & Mortimer  
500 West Madison Street  
Suite 3800  
Chicago, IL 60662-2511

Tel.: (312) 876-2109  
Fax.: (312) 876-2020

F:\Transfer folder\Kim Annel\Lisa\Patents\ABBV4952 US.C1 Amendment.Oct033.doc